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## (54) Title: NITROREDUCTASE BIOSENSORS FOR DETECTING NITRO-COMPOUNDS

T	7 promoter primer #69348-	3			
pET upstream primer #69214-3  Bg/ II	17 promoter	lac operator	Xba I		rbs
AGATCTCGATCCCGCGAAA*	TTAATACGACTCACTATAGG	GGAATTGTGAGCGGATAACA	ATTCCCCTCTAGAAATA	ATTTTGTTTAACTTTAA(	BAAGGAG
Nco 1 _	His-Tag		Ndel Nhel	T7•Tag	
TATACCATGGGCAGCAGCC	ATCATCATCATCACAGC Ishishishishishisser	AGCGGCCTGGTGCCGCGCGG SerGly <u>LeuValProArgGl</u>	CAGCCATATGGCTAGCA ySerHisMotAlaSerM	TGACTGGTGGACAGCAA etThrGlyGlyGlnGln	
BarnH I <u>E∞</u> R	I SactSalt Hind II	Eag i	ombin His•Tag		
ATGGGTCGCGGATCCGAAT	TCGAGCTCCGTCGACAAGCT heGluLauArgArgGlnAlo	TGCGGCCGCACTCGAGCACC	ACCACCACCACCACTGA	GATCCGGCTGCTAACAA rgSerGlyCysEnd	/BCCC
	<i>Bpu</i> 1102 l		T7 terminator		
GAAAGGAAGCTGAGTTGGC	TGCTGCCACCGCTGAGCAAT.	AACTAGCATAACCCCTTGGG	GCCTCTAAACGGGTCTT	GABGGGTTTTTTG	
	T7 terminator prim	ner #69337-3			

(57) Abstract: This invention provides a sensing device comprising an electrode comprising a noble metal layer, on which layer is located a biological material having nitroreductase activity. This invention further provides a method of detecting nitro group containing compounds, the method comprising the steps of: (a) providing a sensing device of the first aspect of the invention and a reference electrode; (b) applying a potential between the electrodes; (c) measuring the current; (d) contacting the sensing device with a sample of substrate material to be tested; and (e) measuring the current change.

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